

From the Executive Summary of the Technical Evaluation of the Gold King Mine Incident, developed by the Bureau of Reclamation of the US Department of Interior, dated October 2015:

It is important to note that although the USACE peer reviewer agreed that the report properly describes the technical causes of the failure, he had serious reservations with the chronology of events internal to EPA from the day of the telephone call to BOR and up to the day of the mine failure. He pointed out that the actual cause of failure is some combination of issues related to EPA internal communications, administrative authorities, and/or a break in the decision path, and that the report was non-specific regarding the source of information concerning EPA documents and interviews with EPA employees and the onsite contractor. The USACE believes that the investigation and report should have described what happened internal within EPA that resulted in the path forward and eventually caused the failure. The report discusses field observations by EPA (and why they continued digging), but does not describe why a change in EPA field coordinators caused the urgency to start digging out the plug rather than wait for BOR technical input as prescribed by the EPA project leader.

Also from the same report, pages 44-45:

On or about July 23, 2015, the EPA OSC (On Scene Coordinator), who was the project leader, made a brief telephone call (about 2 minutes) to Mr. Gobla at BOR to ask if funding of \$4,000 had finally been transferred to BOR for the Red and Bonita Mine. He requested that Mr. Gobla travel to the site. The EPA OSC project leader explained he was about to leave for vacation and wanted a site visit on August 14, 2015, which would be his first day back from vacation. The EPA OSC project leader stated that the upstream form for the bulkhead had been placed in the Red and Bonita Mine and they would be placing concrete in a few days. He went on to say that he did not want any more review of the Red and Bonita Mine; the purpose of the site visit on August 14, 2015, would be for the Gold King Mine as he was "unsure about the plans for the Gold King Mine" and wanted an outside independent review of the EPA/DRMS plans by BOR. The EPA OSC project leader scheduled to have DRMS and contractor personnel in Silverton on August 14, 2015, to present the plans to BOR and be available to answer questions. This was the first time that BOR had heard of the Gold King Mine. The plan was for Mr. Gobla to travel on August 13, 2015, and be onsite all day August 14, 2015; this plan was confirmed, and the call ended without any further discussion about the project or what it would involve.

The internal communication issue flagged by the USACE peer reviewer was not addressed in the internal review conducted by EPA. The following questions will be posed during follow-up internal EPA interviews of the two On-Scene Coordinators:

Potential Interview Questions:

Communication with BOR prior to August 5 [these questions for Steve Way]

- Can you please provide all work planning documents regarding the work during the week of August 3 and the planned consultation on August 14 and any subsequent planned work.
- Did you contact Mike Gobla to discuss the Gold King Mine?
- What day did you contact Mike Gobla?
- What was the purpose of the call?
- Did you make any notes of the call? If so, may I have them?
- Would you please repeat for me now the entire phone call, as best you can?

- The DOI report indicates that funding was being transferred from EPA to Bureau of Reclamation. How much funding was being transferred? Was that funding for Red and Bonita Mine, Gold King Mine, or both? What specific activities were to be supported by that funding? Are there any other funding related issues that are relevant to the BOR support at Gold King Mine?
- Was this the first transfer of funds, or had prior funding been provided? If so for what purpose?
- Did you ask Mike Gobla to visit the Gold King Mine or the Red and Bonita Mines or both on August 14?
- What was the intended purpose of Mike Gobla's visit on August 14?
- Did you express to Mike Gobla during your call that you were "unsure about the plans for the Gold King Mine?" If so, why? What were you unsure of?
- Did you discuss with the EPA internal review team your contact with Mike Gobla in late July and plans to meet with him in mid-August? If not, why not? Was there any discussion about prior or ongoing coordination with BOR?

Hand off of site management from Steve Way to Hays Griswold [these questions for Steve Way]

- What days were you on vacation in July and August 2015?
- Was another OSC covering your sites on the days you were out on vacation? Who? Which sites? How was that OSC selected?
- How far in advance did you plan for another OSC to cover your sites?
- Did you plan that site work would be conducted while you were out? Why was this work to be conducted while you were out, and was it critical that it be conducted while you were out?
- If you were not on vacation, would you have been on-site for this type of activity? Approximately, on average, how many days per month are you on site? What types of actions require your physical presence at the site?
- What specific instructions did you leave to the person covering Gold King Mine when you were out on vacation? Were these instructions verbal or in writing? Did you specifically address what work if any should or should not be done regarding opening the adit at Gold King Mine?
- Do you believe that the OSC followed all of your specific instructions? Why – eg, is the belief based on observations or conversations? What observations? If conversations, with whom?
- How far in advance did you discuss the work to be conducted at Gold King with the OSC covering the site while you were on vacation?
- How did the work carried out at the Gold King Mine on August 4 and 5 relate to your planned meeting with Mike Gobla on August 14?
- Did the work plans for Gold King Mine envision two distinct phases of activities, one during the week of August 3 and the other after August 14?
- Page 52 of the DOI report indicates the plan on August 5, 2015, was to open the Gold King Mine adit. Is this a correct characterization of the work you had asked Hays to carry out and do you believe that is what Hays was doing on August 5?
- If Hays was not opening up the adit, do you believe the work being conducted at the site was to establish clearer lines of sight so that the consultation on August 14 would be more effective?
- Is there anything else you think we should know but that we have not yet asked you about? Do you have any other notes or other pertinent written records that you have not already given me?

Hand off of site management from Steve Way to Hays Griswold [these questions for Hays Griswold]

- Did Steve Way ask you to cover his sites for him while he was on vacation?

- How far in advance did Steve discuss his vacation and his request for you to cover Gold King Mine for him?
- Were your managers aware that you had been asked to cover Steve Way's sites? If so, which managers were aware, to your knowledge? Do you have any written records regarding this?
- Were you at the Gold King Mine prior to August 4, 2015? When? How many times?
- Had you discussed Gold King Mine with Steve Way at any point in 2014?
- Were you at the Gold King Mine on August 4 and 5, 2015?
- What instructions did Steve Way give you for the work that was needed to be done, or specifically not done, at the Gold King Mine while he was on vacation? Were the instructions verbal or written? If written, may we have a copy?
- What was the purpose of your work at the Gold King Mine on August 4 and 5, 2015?
- Please describe the work being done on August 5.
- Page 52 of the DOI report indicates the plan on August 5, 2015, was to open the Gold King Mine adit. Is this a correct characterization of the work being done on August 5?
- If the work being done was not to open the adit, please describe what exactly was the work being done at the site and how did it relate to the BOR August 14th visit? For instance was the work being done to establish clearer line of sight for the August 14th consultation with BOR?
- If work was not being done to open the adit, please describe how this was communicated to the DOI when they were conducting the independent review.
- Did the work plans for Gold King Mine envision two distinct phases of activities, one during the week of August 3 and the other after August 14?
- Is there anything else you think we should know but that we have not yet asked you about? Do you have any other notes or other pertinent written records that you have not already given me?

Other potential areas of questioning:

- Nature of involvement of State DRMS personnel in the activities at Gold King Mine [visits to site, advisory roles, etc.]
- Understanding of the nature of the blockage in adit [geology, physical nature, actual size and location of adit opening, etc.]
- Related to the presentations to and communication with the ARSG: Was the plan fully vetted and was input sought and provided?

Situation of Animas brought to site assessment program years ago [2009]
Steve was asked to go see if there is anything Removal could do [resistance to listing]
We didn't have much info on sources, contributors to watershed, etc. So one of the primary focus areas were the four adits in Cement Creek: Mogul, R&B, GKM, American Tunnel [ARSG, DRMS, etc]
Bruce Stover had written a paper about the R&B bulkhead
Just prior, Bruce had asked Steve about whether there was anything we could do with GKM
We had sat down with the owner of GKM in 2007 Hennis, DRMS wondered if we could work with Hennis to deal with the collapsed mine portal area and his reclamation responsibilities
Tried to do an AOC for removal, we would agree to work with the water if he could do the work on the portal but Hennis chose not to do the work, not enough money
But at that time we were not looking at all of the interrelationships of mines, etc.
Site Assessment was looking at this,
2008 DRMS proceeded with the bond forfeiture plan to close the GKM portal, as they were putting in the pipes, etc., the whole portal collapsed

Jumping forward, in looking at the loads to the Animas river, it was determined that R&B was major contributor, along with GKM and Mogul, but R&B was significant source of zinc

Might be easier to bulkhead R&B because not as closely connected to other adits and a cooperative landowner

2013 evaluated underground

2013-2014-2015 discussions with DRMS and relationship of R&B bulkhead installation and impact on GKM

Inability to investigate what was going on in GKM....

Concern that like American tunnel if we changed conditions inside the mountain we might create a new problem if we didn't know what was going on at GKM

Thus it might not be good to do anything at R&B without knowing about GKM

Steve discussed with DRMS, including Bruce and Allen

Relationships between the mines

Did bulkheading American tunnel impact others? Yes, most agree

[Steve has a design basis memo on R&B]

Lots of holes going from one mine toward the other

Kind of splitting hairs whether it was a drilled hole, collapse, etc or just fractured rock

We could possibly have gone after Sunnyside/Kinross to do GKM but chose not to

If we are not going to list, then the only option is source control via bulkheads

2014 did some investigative work at the R&B adit, the rock, where we would place the bulkhead

Also let's look at possibly opening GKM Sept 2015

Within the first day, we saw lots of water discharge, had gone down from 2009 to 2014, even in 2014, somewhat concerning but flows vary throughout the year

In 2014, it was obvious when we exposed the ground to where they installed the 2 foot pipe at the top of the adit. So we know that there is at least 4-6 feet of water, maybe more

Allen was there with Steve in Sept 2014

Allen provided advice but EPA made the decision

We had qualified very experienced people working with us

Sept 2014 we backed off, put in the drainage pipe, capturing 70 gpm

We put in two drainage pipes, cut a notch into cement for pipes

Fall 2014 walked away

In winter started planning for 2015 work at GKM

Tasked ER to get a mining subcontractor for this, Harrison Weston,

In winter discussed with ER, HW, DRMS the plan to open it

Between fall of 2014 and spring of 2015 meetings were held with ERRS, HW, START, etc., laid out the basic conceptual plan

Similar to approach at other mines, including R&B, DRMS has used it, reduce the water level before you remove the blockage

After another response, talked to Gobla about getting help at R&B, didn't know if we would have GKM funding, also delays in getting IA in place

So we were moving on R&B

Steve had expressed concerns with DRMS, BLM, others, but hadn't had time to figure it out, working at R&B, had money and tasking for BOR for R&B so were going to get their advice on GKM

So we were out there so we were going to start prepping the GKM

So, if we remove the blockage we will need to manage water, will need a conveyance system, to take it to R&B, was not simple but doable, thinking 300-400 gpm, START working with ERRS on the design for that piping system, put in a pump about 6 feet down anticipating the need to keep flow going, plan to manage turbidity, small filter system, sediment bags

There was no plan to have a holding pond like

on page 51

when steve left, the entire onsite team knew that we were only preparing to open the adit, get piping in place, get water management system set up, we are not sure there is bedrock where we hope it is, if not then our plan to construct the portal might not work, we discussed if it was appropriate and, start scraping looking for bedrock, if we didn't know what was the situation, where was the bedrock relative to the blockage, was there a solid place above us for stinger pipe and point of construction for new bulkhead

where is the rock

Hays had filled in for a week in 2014 for Steve

going back to 1989 he was assigned Animas river but no one wanted to do anything

Hays was there in 2014, looked at it, all collapsed, couldn't see anything, what was blocking what

Equipment was there, DRMS was available, we were going to have a look, do some digging, be careful, no intention of opening, expose the rock, some of the blockage, getting ready for discussion on 8/14

On 8/4 Allen was there, started doing a little digging, what we were pulling couldn't have held water, slowly picking away at it

ER was running the excavator, Hays and the entire team was watching, dirt was coming from above, pulling the dirt away, arrived at the blockage – it was tight, material from the roof, collapsed timbers, dry, competent stuff holding back water, had exposed blockage, but still lots of dirt and where was the bedrock

Then Bruce and Allen were both coming the next day, Mike and Steve were not available

So then on 8/5 we looked and agreed not going any further on the blockage itself, we agreed that we need to find the bedrock [there was a slot where the adit opening]

So we proceeded, built a ramp up, probably 15 feet above bottom of adit, reaching up, taking material down, scrape dirt, remove dirt, repeat, got the bedrock exposed, we were at the point that we were done exposing bedrock, front end loader came out, excavator had backed out, spurt of water, there's a spring a clear water, then some rock fell out of the face, that left just enough room from the edge for water to come out, must have been within a foot or two above the brow not several feet

Gobla interviewed along with others, same story

Hays met in Silverton on 8/6 then went to Durango

Steve may meeting powerpoint, June tour with 20+ people, Kirsten Barnes of DRMS was there

Steve: DRMS has a role as the state group working on inactive or abandoned mines, closures, etc., our working relationship, we have worked together, in support of each other's programs and missions on more sites than we can recount, they are involved in any underground work we have done in Colorado they have been part of that effort

Hays, for example we plugged the Gulf tunnel, the year before they did the work on the tunnel and they paid, then we did the plug, same thing as Pennsylvania mine,

The state has said there was a \$25k CA for Red and Bonita, we asked for a deliverable for the engineering support for R&B, we were trying to put an agreement in place

START said it was clear that they would be in major deep doo doo if they disturbed the blockage while Steve was gone

Allen was on site in 2014, he has met with Steve a bunch of times, have met with Bruce on the concerns with how we proceed on GKM, and how we proceed at R&B

Lots of work on lots of site, more than just casual conversations, their expertise with inactive mines, investigations, source control, routine commonplace business interactions between two agencies

Iron springs, opher co, providing cercla waiver tgat they are operating under osc authority

Steve is not a mining expert, he relies on their expertise, they have the experience

The State has identified the animas river as the watershed of highest concern

Can we use the term "mining district"

We have an agreement for them to help with the mogul, working for us under an agreement

ARSG probably thought what we were doing made sense

Steve Ferrin flip flopped, according to Bill town manager

Second day, Hays spoke to Silverton then to Durango, and they were supportive

Statement from steve to IG – the statements in the exec summary compromises any other discussion, for that document to be released with presumptive statemnets about our intent without facts....why would you not do that

What was the direction – this e-mail says that

The USACE guy never made it to the presentation, never spoke with the corps

Steve: this was approached with the ultimate objective of opening the adit as long as we had the info we needed, based on info from the excavation, it was an unstable poorly constructed mine opening, further instability, recognition of the uncertainty, we were in the process of evaluating the conditions, at the first opportunity we had since 2014

Rain runoff event in June had higher loads than the GKM release